

What is claimed is:

1. An image forming method comprising:

applying an image processing for forming an optimum viewing image on an output medium to captured-image data outputted from an image-capturing device; wherein a process of the image processing comprises:

a scene-referred image data generation process for generating scene-referred image data on the basis of the captured-image data; and

a viewing image referred image data generation process for generating viewing image referred image data on the basis of the generated scene-referred image data;

wherein, the image processing comprises:

a smoothing processing and a sharpening processing.

2. The image forming method of claim 1, wherein the smoothing processing is practiced in the scene-referred image data generation process and the sharpening processing is practiced in the viewing image referred image data generation process.

3. The image forming method of claim 1, wherein the smoothing processing is practiced in the scene-referred image data generation process and the sharpening processing is practiced after the viewing image referred image data have been generated in the viewing image referred image data generation process.

4. The image forming method of claim 1, wherein the smoothing processing is practiced at first and a sharpening processing is practiced next, in the scene-referred image data generation process.

5. The image forming method of claim 1, wherein the smoothing processing is applied to the scene-referred image data generated in the scene-referred image data generation process, and the sharpening processing is practiced in the viewing image referred image data generation process.

6. The image forming method of claim 1, wherein the smoothing processing is applied to the scene-referred image data generated in the scene-referred image data generation process, and the sharpening processing is practiced to

viewing image referred image data generated in the viewing image referred image data generation process.

7. An image processing apparatus which applies image processing for forming an optimum viewing image on an output medium to captured-image data outputted from an image-capturing device comprising:

- a scene-referred image data generation section for generating scene-referred image data on the basis of the captured-image data;

- a viewing image referred image data generation section for applying an image processing for optimizing the scene-referred image data to generate viewing image referred image data;

- a smoothing processing section for applying a smoothing processing; and

- a sharpening processing section for applying a sharpening processing.

8. The image processing apparatus of claim 7, wherein the scene-referred image data generation section includes the smoothing processing section for applying a smoothing processing to the captured-image data, and the viewing image

referred image data generation section includes the sharpening processing section for applying a sharpening processing to the scene-referred image data.

9. The image processing apparatus of claim 7, wherein the scene-referred image data generation section includes the smoothing processing section for applying a smoothing processing to the captured-image data, and the viewing image referred image data generation section includes the sharpening processing section for applying a sharpening processing to the generated viewing image referred image data.

10. The image processing apparatus of claim 7, wherein the viewing image referred image data generation section includes the smoothing processing section for practicing a smoothing processing and the sharpening processing section for practicing a sharpening processing in the generation process of the viewing image referred image data by the viewing image referred image data generation section.

11. The image processing apparatus of claim 7, wherein the scene-referred image data generation section includes the

smoothing processing section for applying a smoothing processing to the generated scene-referred image data, and the viewing image referred image data generation section includes the sharpening processing section for applying a sharpening processing to the scene-referred image data having been subjected to the smoothing processing.

12. The image processing apparatus of claim 7, wherein the scene-referred image data generation section includes the smoothing processing section for applying a smoothing processing to the generated scene-referred image data, and the viewing image referred image data generation section includes the sharpening processing section for applying the sharpening processing to the generated viewing image referred image data.

13. An image recording apparatus which applies image processing for forming an optimum viewing image on an output medium to captured-image data outputted from an image-capturing device, and outputs the optimum viewing image on the output medium comprising:

a scene-referred image data generation section for generating scene-referred image data on the basis of the captured-image data;

a viewing image referred image data generation section for applying an image processing for optimizing the scene-referred image data to generate viewing image referred image data;

a smoothing processing section for applying a smoothing processing; and

a sharpening processing section for applying a sharpening processing.

14. The image recording apparatus of claim 13, wherein the scene-referred image data generation section includes the smoothing processing section for applying a smoothing processing to the captured-image data, and the viewing image referred image data generation section includes the sharpening processing section for applying a sharpening processing to the scene-referred image data.

15. The image recording apparatus of claim 13, wherein the scene-referred image data generation section includes the smoothing processing section for applying a smoothing

processing to the captured-image data, and the viewing image referred image data generation section includes the sharpening processing section for applying a sharpening processing to the generated viewing image referred image data.

16. The image recording apparatus of claim 13, wherein the viewing image referred image data generation section includes the smoothing processing section for practicing a smoothing processing and the sharpening processing section for practicing a sharpening processing in the generation process of the viewing image referred image data by the viewing image referred image data generation section.

17. The image recording apparatus of claim 13, wherein the scene-referred image data generation section includes the smoothing processing section for applying a smoothing processing to the generated scene-referred image data, and the viewing image referred image data generation section includes the sharpening processing section for applying a sharpening processing to the scene-referred image data having been subjected to the smoothing processing.

18. The image recording apparatus of claim 13, wherein the scene-referred image data generation section includes the smoothing processing section for applying a smoothing processing to the generated scene-referred image data, and the viewing image referred image data generation section includes the sharpening processing section for applying the sharpening processing to the generated viewing image referred image data.

19. The image forming apparatus of claim 1, wherein the smoothing processing is carried out by means of a filter to change mask sizes, mask shapes, and threshold values, on the basis of the noise characteristic of image data.

20. The image processing apparatus of claim 7, wherein the smoothing processing is carried out by means of a filter to change mask sizes, mask shapes, and threshold values, on the basis of the noise characteristic of image data.

21. The image recording apparatus of claim 13, wherein the smoothing processing is carried out by means of a filter to change mask sizes, mask shapes, and threshold values, on the basis of the noise characteristic of image data.



22. The image forming method of claim 1, wherein an amount of application of the sharpening processing is adjusted in accordance with a kind of the output medium.

23. The image processing apparatus of claim 7, wherein an amount of application of the sharpening processing is adjusted in accordance with a kind of the output medium.

24. The image recording apparatus of claim 13, wherein an amount of application of the sharpening processing is adjusted in accordance with a kind of the output medium.

25. The image forming method of claim 1, wherein an amount of application of the sharpening processing is adjusted in accordance with a size of the output medium.

26. The image processing apparatus of claim 7, wherein an amount of application of the sharpening processing is adjusted in accordance with a size of the output medium.

27. The image recording apparatus of claim 13, wherein an amount of application of the sharpening processing is adjusted in accordance with a size of the output medium.

28. The image forming method of claim 1, wherein an amount of application of the sharpening processing is adjusted in accordance with the size of a main photographic object.

29. The image processing apparatus of claim 7, wherein an amount of application of the sharpening processing is adjusted in accordance with the size of a main photographic object.

30. The image recording apparatus of claim 13, wherein an amount of application of the sharpening processing is adjusted in accordance with the size of a main photographic object.

31. The image forming method of claim 1, wherein an amount of application of the sharpening processing is adjusted in accordance with a photographed scene.

32. The image processing apparatus of claim 7, wherein an amount of application of the sharpening processing is adjusted in accordance with a photographed scene.

33. The image recording apparatus of claim 13, wherein an amount of application of the sharpening processing is adjusted in accordance with a photographed scene.

34. The image forming method of claim 1, wherein the captured-image data outputted from the image-capturing device are the scene-referred image data.

35. The image processing apparatus of claim 7, wherein the captured-image data outputted from the image-capturing device are the scene-referred image data.

36. The image recording apparatus of claim 13, wherein the captured-image data outputted from the image-capturing device are the scene-referred image data.

37. The image forming method of claim 1, wherein the captured-image data outputted from the image-capturing device are scene-referred raw data.

38. The image processing apparatus of claim 7, wherein the captured-image data outputted from the image-capturing device are the scene-referred raw data.

39. The image recording apparatus of claim 13, wherein the captured-image data outputted from the image-capturing device are the scene-referred raw data.

40. The image forming method of claim 1, wherein the captured-image data outputted from the image-capturing device are the viewing image referred image data.

41. The image processing apparatus of claim 7, wherein the captured-image data outputted from the image-capturing device are the viewing image referred image data.

42. The image recording apparatus of claim 13, wherein the captured-image data outputted from the image-capturing device are the viewing image referred image data.